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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 09/547,663 | 04/12/2000 | EMI TAKABAYASHI | A-355 | 6241 |
| 802 | 7590 | 01/06/2006 | EXAMINER | |
| DELLETT & WALTERS | | | CHANG, AUDREY Y | |
| P. O. BOX 82788 | | | ART UNIT | |
| PORTLAND, OR 97282-0788 | | | PAPER NUMBER | |
| | | | 2872 | |

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/547,663

Applicant(s)

TAKABAYASHI ET AL.

Examiner

Audrey Y. Chang

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-3,5,6,17 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 16, 2005 has been entered.
2. This Office Action is also in response to applicant's amendments filed on July 18, 2005 and November 22, 2005, which have been entered into the file.
3. By these amendments, the applicant has amended claims 1 and 17 and has canceled claims 4, 7-16 and 19.
4. Claims 1-3, 5-6, and 17-18 remain pending in this application.

Conclusion

5. This application is in condition for allowance except for the following formal matters:

Claims 1-3, 5-6 and 17-18 are objected to because of the following informalities:

(1). The phrase "a reflection and volume hologram" recited in claim 1 is confusing and wrong, it should be termed as "a reflection **type** volume hologram".

(2) The phrase "the reconstructed image of the plane pattern and its plane shadow differs" recited in claim 1 is confusing and indefinite since it is not clear what is this "plane shadow", how does the reconstructed image of the "plane shadow" being coming about and how are these reconstructed images being *different* from each other.

(3). Claim 1 and its dependent claims are confusing since it is not clear how exactly are these "color pattern of plane characters or images", "color three-dimensional subject image" and "plane

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shadow” related to the “reflection type volume hologram”, this therefore makes the scopes of the claims unclear and indefinite. As judged from the specification of the instant application, it appears that the “color pattern of plane characters or images”, its “plane shadow” and the “a color three-dimensional subject image” are *each* been recorded as a “reflection type volume hologram”, there are at least three different holograms being recorded in the single layer. The claims (claim 1) therefore is better termed in the following manner:

“A color hologram display *comprises* a single layer photosensitive material wherein a color pattern of plane characters or images, its plane shadow and a color three-dimensional subject image are recorded as reflection type volume holograms within the photosensitive layer, the reconstruction image plane of the plane shadow is different from the reconstruction image plane of the color pattern so that the reconstructed image of the plane pattern and the reconstructed image of the plane shadow *changes* as the observation depth varies from the surface of the hologram display”.

(4) The phrase “to be reconstructed on the surface of the color three-dimensional subject image” recited in claim 17 is confusing and wrong. It is believed that it should be read as “reconstructed on the *reconstruction image plane* of the color three-dimensional subject image”.

Appropriate correction is required.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Allowable Subject Matter

6. The following is a statement of reasons for the indication of allowable subject matter: of the prior art references none has disclosed a color hologram display that is comprised of a single layer

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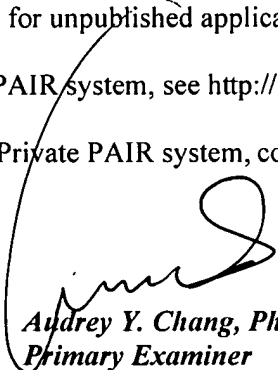
photosensitive material *having a color pattern of plane characters or images, its plane shadow and a color three-dimensional subject image* recorded in the **single** layer as *reflection type volume holograms* wherein the *reconstructed image plane* of the plane shadow is different from the *reconstruction image plane* of the color pattern of plane characters or image so that the reconstructed images of the color pattern and its plane shadow changes as the observation depth varies from the surface of the hologram display.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Audrey Y. Chang, Ph.D.
Primary Examiner
Art Unit 2872

A. Chang, Ph.D.